

MULTIMODE RAMAN FIBER DEVICE WITH MODE DISCRIMINATION

ABSTRACT OF THE DISCLOSURE

A multimode optical fiber has a core that includes radially dependent dopant materials to provide a desired refractive index profile and a desired Raman gain coefficient profile. A laser diode pump laser array provides high brightness light that is launched into the fiber and is subject to maximum Raman gain along the optical axis, thereby favoring the lowest order mode of the fiber, discriminating against higher order modes and providing a high brightness, diffraction limited output. The fiber can be incorporated into oscillators, amplifiers and other optical devices.